WINTER 1961-62 Vol. XL No. 2

File

educational horizons

OFFICIAL PUBLICATION OF PI LAMBDA THETA

purpose . . .

PI LAMBDA THETA is a national honor and professional association for women in education.

ITS PURPOSE shall be to maintain the highest standards of scholarship and professional preparation and to foster professional spirit and fellowship by

WORKING actively to further the cause of democratic education;

CO-OPERATING in the solution of problems which interpenetrate various fields of knowledge;

ENCOURAGING intercultural understandings;

STRIVING for a clear understanding of local, state, national, and international problems and stimulating active participation in their solution;

ENCOURAGING graduate work and stimulating research.

educational horizons

OFFICIAL PUBLICATION OF PI LAMBDA THETA

Winter, 1961-62 VOL. XL · NO. 2

from the editor 122 *Miriam M. Bryan*

creativity and education 123 *Harold H. Anderson*

the new era is now 130 *A. J. Foy Cross*

surveying what education is doing to help adolescents move toward maturity 136 *Blanche G. Bobbitt*

research 140

national board and national committees 153

chapter presidents and correspondents 154

Opinions expressed in this publication are those of the authors and do not necessarily reflect the official views of the organization.

Editor
MIRIAM M. BRYAN
Educational Testing Service
Princeton, New Jersey

Address all correspondence pertaining to subscriptions and mailing to Pi Lambda Theta, Carry Building, Suite 1211, 927 Fifteenth Street N.W., Washington 5, D.C. *Educational Horizons* is published in Fall, Winter, Spring, and Summer. The subscription price for nonmembers is $2.00 a year; single copies are 40 cents. The office of publication is Curtis Reed Plaza, Menasha, Wisconsin. Second-class postage paid at Menasha, Wisconsin.

EDUCATIONAL PRESS ASSOCIATION OF AMERICA

Printed in the United States of America.

This issue of *Educational Horizons* is the first of several issues which will be devoted to the pursuit and expansion of the topic selected by the National Board as the theme for the 1961-63 biennium, "Creative Teachers for a New Era."

The first step in the exploration of this topic was taken this past summer when the Biennial Council, meeting in Chicago, centered its deliberation on it. The major addresses delivered at Council were presented in full and the group discussions growing out of them were summarized in the Fall, 1961, issue of this journal.

The second step is being inaugurated with the reprinting in this issue of Harold H. Anderson's "Creativity and Education," widely acclaimed as one of the most stimulating of the scholarly articles that have recently been written on this topic; and with A. J. Foy Cross's "The New Era Is Now" and Blanche G. Bobbitt's "Surveying What Education Is Doing to Help Adolescents Move Forward toward Maturity"—both thoughtful and thorough discussions of practical and pressing problems closely related to the topic.

In forthcoming issues of *Educational Horizons,* various aspects of the theme will be further illuminated by articles contributed by authorities in the different professions and disciplines who have used their own creative talents to inspire creative thinking and creative teaching on the part of others.

MIRIAM M. BRYAN
Editor

creativity and education

HAROLD H. ANDERSON*

I SHALL examine two systems of education in an attempt to demonstrate the role of each in producing creative persons.

The Open and the Closed Systems in Education

1. *The Open System.* The Open System is a stimulating system of relationships which accepts uniqueness in perception and in thinking. Familiar examples of the Open System in education are found in the seminar, the class discussion, the term paper, the original experiment, or student project.

These are examples found at different levels in the educational program. The greatest opportunity for learning in the Open System, however, is found in infancy and the preschool years when there are few environmental demands, no curriculum, and little systematic teaching. It is at this period of no curriculum and little pressure that the greatest and most rapid learning takes place and that creativity is most universally manifest. The Open System permits originality, experimentation, initiative, and invention; it constitutes the propitious environment for creativity.

2. *The Impersonal Closed System.* In education the Closed System is concerned very little with originality or invention by the student. It is concerned mainly with acquiring a body of knowledge, memorizing of facts, and finding answers to problems—all of which are already known to someone else.

a. *The educational curriculum.* In education the Closed System is concerned with the memorizing of facts, formulas, and beliefs, and the acquiring and storing of information. The information may be highly verified scientific findings, or it may represent bias, prejudice, superstition, or grossly false reports.

I am not belittling the multiplication tables nor the desirability of learning facts, because these are the tools of thinking and of communicating. They are means to an end.

In the Closed System of education the student has only to learn what his forebearers have already discovered or agreed upon. He learns what someone else thinks is right or wrong, to follow directions, and do what he is told. Unfortunately for

---

* HAROLD H. ANDERSON is research professor of psychology at Michigan State University, East Lansing, Michigan.

Reprinted from the May 1, 1961, issue of the *College & University Bulletin* by permission of the author and of the Association for Higher Education.

most of us that is where our school learning stopped. It is, however, the system by which the heritage of the race is preserved—including the sorting, classifying, and cataloging of attics full of useless, unlovely, and undiscarded psychic antiques.

b. *Fixed-answer problem solving.* In the Closed System of education the problems have "fixed answers," that is, the answers are in the back of the book, they have been agreed upon by the culture, or they are found in the teacher's hand or in the program of the teaching machine. Closed-system education requires a kind of learning common to chemistry, physics, and mathematics, but is found in all subject-matter areas.

c. *Psychological laboratory studies in learning.* Almost all of our traditions and psychological theories about learning and problem solving have been obtained from "fixed-answer" or closed-system experiments. Rewards and punishments and "avoidance learning" in animals or in humans have defined goals and patterns of research design set in advance by the experimenter. They are excellent for the kind of obedience learning so important in dog training. But they do not produce the open-system creativity found in humming a new tune, writing a poem, or making a scientific invention.

It is yet unknown to what extent the closed-system learning theories of the animal laboratory can be applied to the purposes of general education. It is certainly unknown to what extent closed-system conformity (reinforcement) learning of the psychological laboratory can be applied, if at all, to the creative process in human behavior or to open-system learning. Psychologists know practically nothing about open-system learning.

d. *Intelligence testing.* Mental testing is another area of psychological activity which reveals the wide extent of the Closed System. Practically all intelligence, ability, and achievement tests represent closed-system performance. In these tests the ideal performance is conformity to the examiner's norms, to his standards of excellence, his criteria of desirable or even of usual behavior. We are just beginning to discover the meaning and the limitations of the Closed System in our past endeavors in psychological testing. For 20 years we have known that there is something beyond an IQ of 140 that is important for productivity. But for 20 years we have known that it is not additional IQ points that make the difference. Creativity adds little to the child's IQ score. In Terman's genetic studies of "genius" the subjects were selected on the basis of their performance on closed-system "normative" tests with answers in the back of the test manual. In retrospect it is not surprising that the children in Terman's study, while developing into intellectually competent adults, have not distinguished themselves by their great originality in the arts and sciences. These "geniuses" were selected not on the basis of a demonstrated originality or uniqueness in their responses but on the basis of their *swift and superior conformity in cultural norms.*

e. *Normative individual differences.* Certain other limitations in classifying students were not apparent in the early stages of the testing movement. Creativity,

uniqueness, invention could not be treated within the conventional Closed System of statistical techniques. For example, the concept of individual differences became submerged in the normative treatment of testing programs that produced central tendencies and correlations.

The research goal of the early testing movement was, however, primarily correlation and prediction. But only similarities can be correlated, and only the defined can be predicted. The uniqueness, which can neither be predicted nor in advance defined, and which is a necessary evidence of creativity, has been generally ignored or discarded by the statisticians and the testers. Only recently have there been efforts to capture and assess in test responses qualities of originality which for 40 years have been discarded.

f. *Projective tests.* The spontaneous outburst of "projective" testing of the 1930's and 1940's was an effort to break out of the closed-system method of "scientific evaluation" and to come closer to the originality of hidden truths in the unconscious. By the 1950's we could see that to assess an individual is also to assess his interacting both with accepting and with threatening persons. Projective tests were a discovery of a means of inducing symbolic communication in otherwise threatening situations. To discover the hidden truths of the unconscious is to open a Closed System of defenses which the person has erected against a threatening environment of tabus, guilt, and derision. Projective tests permit the unconscious in symbolic ways to come nearer to the conscious, to come into the open.

g. *The problem of motivation.* If the closed system of education consisted only in making available to the student a record of man's past experience, achievements, or agreements, educators would have few problems of motivation. Small children are curious investigators, open minded and adventuresome, interested in practically everything that touches their five senses. There is no problem of motivating small children. When the child goes to school, however, he encounters a curriculum which includes certain social pressures for him to learn, all of which have been set up by someone else. If we were to ask one question about motivation it would be: What have the persons in the child's environment done to him to make the record of the past distasteful to him? Problems of motivation in education are probably related to the pervading presence in our educational institutions of environmental demands and expectations buttressed by force, threats, social pressures that constitute another kind of Closed System which I shall mention next.

3. *The Personal Closed System.* The Closed System of man's past experience which I have described above is an impersonal Closed System. The past does not react, or respond, or interact with man. The past can inspire man or cause him to pause in wonder, but all diggers are the same to the dinosaur's bones. There is no motivation in the dinosaur's bones. The person-to-thing relating is of different order than the person-to-person relating.

Person-to-person relating is of two directional orders: The Open System in which one individual both stimulates another and accepts another—which permits the other to *go* beyond himself and at the same time *to be himself* in inter-

acting, to be unique, honest, and most important, creative. The other order is also directional but opposite to the Open System in that one individual tends to restrict the expression of uniqueness, to obstruct or inhibit the creative interaction. Through *domination* one person exerts *power over* another, or through *usurpation* puts himself in the place of another and does his thinking and directs his acting. In both domination and usurpation there is force, threat, or the symbolic expressions of force in shame, guilt, and other techniques for the stifling of individual differences and for producing conformity. This personal domination and its symbolic expressions is the antithesis of love. It is so widespread in the history of man as to have led Freud to postulate hostility as instinctive. It is so universal as to have led others more recently to classify it as a psychic plague analogous to the physicist's *entropy*,[1] which, according to the second law of thermodynamics, operates only in a closed system as a degrading of the quality of energy over time.

The history of the social evolution of man is a record of man's efforts to break out of a personally Closed System of domination and usurpation and advance into the greater freedom of an Open System with correspondingly greater respect for the individual. Differences between the personally Open System and the personally Closed System are found in extreme forms in the contrast of democracy versus dictatorship, of freedom versus slavery. Milestones along the path of civilization in controlling this plague of treating man as a thing, of using force and authority to usurp the creative prerogatives of man, are seen in the Magna Charta, the Declaration of Independence, and in the Supreme Court decision on integration of races in the schools. It is seen also in revolts against colonialism in the Far East and in Africa.

The education program has inherited the biases, fears, and anxieties, of parents who are afraid to permit children to think and act for themselves. What is the meaning of compulsory attendance, of required courses, of core curricula, of specific assignments, of examinations, rewards, trophies, prizes, "honor" societies, failures, and punishment except as expressions of control? The use of *power over* a student is first an expression of lack of respect or of confidence in the person over whom it is used. It in turn becomes a source of anxiety in the student, an inciter of defenses, and hence a degrading of the quality of behavior of which the student is capable. The predicted outcome of this cultural domination is loss of "motivation" and revolt, or conformity, submission, and psychic atrophy.

The Meaning of Creativity

When we discuss creativity in education, everything we say must be interpreted in a context of relativity. There are no absolutes except by definition. Superlatives are expressions of poetic license, artistic exaggerations, caricatures to emphasize a point.

It is axiomatic that creativity must represent the emergence of an original, something unique. If we can accept this axiom, let us examine several propositions about creativity.

[1] Harold H. and Gladys L. Anderson, "Social Development," in Leonard Carmichael (ed.), *Manual of Child Psychology* (2d ed., revised; New York: John Wiley & Sons, 1954), pp. 1162-1209.

1. *Creativity as Product and as Process.* Traditionally creativity is associated with a painting, a piece of sculpture, a sonnet, an invention, a product that can be seen, studied, enjoyed. The product, however, took time to produce; it did not happen all at once. In the conception and the making of the product there have been several attempts and failures, transitions and revisions. Creativity must be thought of as a process of planning, experiencing, acting by the person who is creating the product.

The finished tangible product of creativity has been given greater attention than the obscure process leading to it. The process is often unverbalized, even by the person himself, and therefore uncommunicated to others. We are, nevertheless, concerned here with creativity as a developmental process from infancy throughout the entire life span.

2. *The Process of Creativity Exists Only in the Moment of Now.* One can define or describe the Mona Lisa only *after* it has been painted. The product creativity is not predictable. The product is not even definable or describable until the student, the author, the artist, or someone else can look back on a process that, as far as this product is concerned, has been interrupted, stopped, fixed, closed.

The product exists only in the closed past; the process only in the open instantaneous moment of now. The process is the flow of the "totality" of the person between the historic past and the unknown, unpredicted, and unpredictable future.

3. *The Product of Creativity Exists Only in the Past.* The products of the sciences and the arts not only belong to the past; they take on the characteristics of the crystallized Closed System of the past. The product of past experience has a static, unchanging immobility. It is rarely that from the product one can infer or imagine the process, the struggle, the imagination, frustrations, endurance that went into the product. Hemingway succeeded in an extraordinary way in presenting vividly and understandably the successive moments of now in the story of *The Old Man and the Sea.* But he has not told us of his successive moments of now in conceiving and writing this exquisite tale. In fact, it may be one of the illusions by which we presume to judge the quality of greatness that the product is so stripped of nonessentials and irrelevancies that it seems in its simplicity to have come without effort.

4. *Creativity, However, Is Based upon an Awareness of the Past.* The reports of creative persons rather consistently imply that the process that produces a novel product is based on wide and deep knowledge and experience, in addition to skills, persistence, and hard work.

The past, however, contains answers only to problems of the past. Attempts to apply the answers of the past to problems of the present produce stereotypes. "Answers" to the problems of the present are derived from reorganization of experience by a human being from his awareness of the past; but the answer is invented by the individual person interacting spontaneously and creatively with his present environment. The moment of invention is now; it is the spontaneous, truthful expression of a person interacting with his environment. With a richer aware-

ness of the experience of the past the person can presumably act more fully.

5. *Creativity as a Quality of Protoplasm.* In biology each cell is unique, a special and individualistic organization of matter. No one has found two biological cells identical; no one expects to. A biological cell—life—is the emergence of an original.

In evolution, as cells "learned" to interact in a mutually harmonious way, they became specialized in structure and in function. Over millions of years the process of organization of matter has continued, producing different varieties of differentiation (specialization) and integration (harmonious interaction in a unity of purpose). As far as they can make comparisons physiologists say that the human organism has the highest degree of differentiation and the highest levels of integration of cells yet brought forth in the process of evolution.

These aggregates of cells called humans are also unique. Each human is an original. As an individual interacting with other humans in his environment he is a moving, growing, changing, flowing uniqueness. As is true for his cells, the individuality of his total organization and the harmony of purpose or the integration with other humans are basic necessities for his optimum development.

6. *Creativity as Harmonious Interacting (Socially Integrative Behavior).* Uniqueness or individuality is not enough to describe the *process* of creativity. The person does not live in a vacuum. *Life,* itself, is an Open System and one cannot live fully without a harmonious or integrative interacting with his environment. Creativity as an unfolding or flowing of individual differences presupposes an individual in a propitious environment. Creativity is not found in the person, as such. We know that in certain situations one is stimulated and feels more free to be himself—in other situations he feels threatened, inhibited, and becomes cautious or even afraid to express his ideas. Life is a process of interacting; it is creative to the extent that the interacting is harmonious. Persons in the environment can facilitate or retard the interacting. To the extent that this interacting is threatening or lacking in harmony, one becomes defensive and to this extent lacking in the expressions of originality.

7. *Creativity as a Developmental Process.* The infant starts life in a relatively Open System of interacting and of freedom of interplay with his environment. As he develops in ability to communicate and to extend his mobility, the environment of persons begins to close in on him. The child encounters a complicated system of environmental demands, tabus, socializing and acculturating processes. These early requirements for conformity are climaxed by a school curriculum which also is mostly Closed System learning and from which there is no escape. The environments of most children do not stimulate nor even permit the continuing process of development in creativity.

It is not surprising that in early childhood creativity is universal and that among adults it is almost nonexistent.

8. *Range of Activities Included under Creativity.* Creativity viewed in terms

of the above propositions is to be found in everyone and at all ages. It then follows that the range of activities to be included under creativity would be very wide indeed. The question will occur to some whether the concept of creativity thus becomes so general as to have lost its meaning. The concept of creativity is indeed broad and general, but it has not thereby lost its meaning. No one asks whether *learning* at any age or at any level or in any medium is so general as to have lost its meaning. Creativity as process is important not because the product of each moment is such a gem but because the process is the essence of life itself.

9. *The Unconscious: The Truth within the Self.*[2] No one knows where or how the unconscious develops in the human infant. The concept of the unconscious as developed by Freud is today being re-examined to make it consistent with assumptions that the basic, primary things in the universe are positive and directional: love, life, growth, communication, harmony, evolution, and progressing integration with the cosmos.

Reports of adults, of poets, scientists, artists indicate that consciousness by itself does not seem to be able to produce things of beauty, truth, and harmony, or at least not to do it so well as when one can draw on the so-called depths of the unconscious, *the truth within the self.*

The conscious and cultural world of the adult and of the child is intolerant of truth and beauty as the person himself sees it. The person is thus obliged to behave in restricted and symbolic ways, revealing only so much of himself as it is safe to reveal. The quality of one's symbolic behavior is degraded to the extent of the necessity to cloak and disguise it in the double talk which a judging, evaluating, and dominating culture requires. The remainder of his conscious behavior is a camouflage or veneer which every adult has learned very early and painfully as a child but very well in the "socializing" process.

The inspired moments reported by creative adults as coming in the night, on a walk alone, or in the early morning hours seem to be moments when the person can more easily cast off the trappings of sham, the irrelevancies of the culture, with which he is obliged to live and which color his conscious thinking. It is at these rare, inspired moments of unity, harmony, and security in his interacting with the universe that one senses his originality, lives consciously with his unconscious, becomes creative.

To live creatively is to live truthfully. *It is to live truthfully as one himself sees the truth.* To live merely according to the truth as anyone but himself sees the truth is not creativity, but conformity.

[2] The remarks on the unconscious have been adapted by permission from the writer's concluding chapter in Harold H. Anderson (ed.), *Creativity and Its Cultivation* (New York: Harper and Brothers, 1959).

the new era is now

A. J. FOY CROSS*

THE FIRST HALF of the twentieth century has made obsolete the historic time-tables of social evolution. In this brief time, which represents but a few seconds on the face of the clock of time, man on earth has broken the pace at which he traditionally has changed his way of doing things.

Deep back in history, man and his ways changed slowly. The great-grandparents of today's adults used tools of home living from iron pots to furniture and grandfather clocks which were produced to last through the coming and going of several generations. In their day and in the days of their ancestors, there was little perceptible change in everyday life from one generation to another.

Evolution of adaptation to problems of living has always been under way, but at first such evolution was almost imperceptible. The pace of change has, however, speeded up over the years with the discovery and application of each new medium of communication. First, there were crude attempts to communicate by pictorial representation. At that point, man profited for the first time from the experience of people other than those whom he could see or hear. Then, as he learned the importance of passing on his experience to his progeny, man began the long, slow process of improving the media of communication.

With each break-through of the barriers to communication, man has quickened his pace toward his goal of controlling his environment and adapting to it. With each improvement in communication, man has come closer to success in his age-old striving to change for the better to improve his lot. Here, in the mid-twentieth century, at the beginning of a new era, we see man at a new peak of his ability to communicate and, consequently, to progress more rapidly than ever before toward the achievement of his unchanging goal of changing whatever stands in the way of a better, more healthy, more friendly, more happy life on earth.

One whose point of view is not restricted to a myopic scrutiny of the ever fewer errors and ills of society cannot but agree that, with improved communication, the world is getting better. A look through the peep sights of some authors and columnists on education-sniping missions and the limited periscopic sightings of certain admirals may have presented a different view. Some look back at the history of mankind and see only a scene on which the mileposts are dates and the landscape is just one gigantic battlefield. But from the top of the towers of

This address was presented at the educational institute sponsored by Rho Chapter in the fall of 1961.

---

* A. J. FOY CROSS is a professor in the School of Education, New York University, New York City.

knowledge now available to those who demand an unrestricted view ahead as well as a clear picture of the past, one sees, among the blighted areas scarred by wars, pestilence, and social ills, vast cultivated fields where man's labor for good shows promise of rich harvests of better living.

Here we wish to consider how we may employ these towers of knowledge in ways which will help our schools to reap this rich harvest and make best use of it. Let us make some basic assumptions and express how these basic assumptions challenge us in our planning for better schools for the new era.

Assumption Number One

First, we must assume that today's boys and girls (and their sons and daughters) have the right to expect a much better education than that which has been provided youth at any time in the past.

The great nations of the world have been busy, not only in developing better ways of communication, of transportation, of making and distributing goods, and of improving the health and welfare of people, but also in discovering and developing new and greatly improved ways of helping people learn. An important part of our heritage is now a vastly enlarged and rapidly expanding body of knowledge about how people learn and what types of learning experiences make for better life in a better world community.

The challenge of this assumption is how do we assure boys and girls in school today of their rightful heritage of rapidly improving educational know-how?

This is a challenge to (a) *the public.* What can we as citizens do to make sure that our children are *not* less happy, less healthy, less successful in tomorrow's world because of a failure to apply today the best available educational know-how? How do we go about making sure that the teachers of our children will pass on this heritage to them? How do we go about making sure that the school facilities of our community will not themselves keep our children from enjoying the benefits of the best educational procedures our society has to offer? How can we protect this heritage of our boys and girls from the educational quacks and witch doctors and the *educationally senile* citizens who attack the modern educational facilities and procedures of the twentieth century?

This is a challenge to (b) *the colleges for teacher preparation.* What provisions for research, what college learning experiences will assure tomorrow's children that they will have teachers who know and are skilled in applying the best educational procedures? What can colleges do to prepare teachers who will go on constantly looking for and learning how to apply even better educational practices as such practices are developed in the future?

This is a challenge to (c) *the teachers and administrators in our schools.* How do these front-line members of the profession get up to date and keep up to date in the rapidly changing and improving practices of the education profession? What do they do with the professional charlatans and educationally subversive teachers and administrators in their own ranks?

This is actually a challenge to all of us. Who will be at fault if our boys and girls are less well educated than we know how to educate them? Will it be a public which tolerates less than the best in facilities and curriculums? Will it be

colleges and universities which fail to adapt, which fail to assume their educational leadership responsibilities? Will it be members of the education profession who fail in their duty to give only the best? Or will it perhaps be the joint failure of all of us together to marshal co-operatively all community forces for the purpose of assuring our youth of its rightful heritage of education in these first years of the "universal" age?

Assumption Number Two

Second, we must assume that, in the formal school education of the past, "teaching" has been held, for all practical purposes, to be approximately synonymous with communication. School education has been measured in terms of the effectiveness of communication of selected knowledges and skills. Even today, schools, teachers, and pupils are (to a large extent) still measured and graded by instruments which determine only how well certain facts have been communicated.

There is, however, promise of a new look in evaluation. Schools, teachers, and pupils are, more and more, being evaluated in terms of the total behavior of the product of the school. How much more healthy is a child for having gone to school? Not how many credits does he have in health and physical education. How well does he communicate in writing and speaking? Not how many credits does he have in English. How well does he practice the principles of good citizenship? Not how did he do on the social studies tests! How well has he learned how to learn? How confident and skilled is he in recognizing, organizing, and solving everyday learning problems and in evaluating his learning results? Not how well can he remember enough of the right answers to pass the "college boards."

We must assume that society is evaluating people in terms of how healthy and well adjusted they are, how well they get along with and respect other people, how well they have learned how to learn and to go on learning, how competent they are to recognize and solve well the problems of living in the twentieth century.

This is a challenge to (a) *again, the public*. When we, the citizens, evaluate the efficiency of the schools for which we are providing, how can we be sure we get our twentieth-century money's worth? We have become fairly competent in evaluating the performance of a lawyer, a surgeon, a dentist, a mechanic. We know what we want, and we demand evidence that we get it. But when it comes to schools, we accept a meaningless grade on a report card, a meaningless attendance record, a transcript of credits which is in turn meaningless as evidence of performance. What can we use to evaluate our efforts to "educate" in place of such instruments of "standardized mediocrity"? How can we find out for sure whether our boys and girls have advanced in everyday use of communication skills, in citizenship practices, in health and well-being from having gone to school? How can we determine not only whether boys and girls are admittable to college but whether they are really ready to go to college and learn and behave in such a way as to complete a college career and benefit from it?

This is a challenge to (b) *the teachers and administrators in our schools*. How

are we going to adapt our evaluation processes and our curriculum so that we will know for sure whether or not a boy or girl needs and profits from any one of the courses or activities in our schools? Professional educators cannot serve two masters. They cannot be judged as either efficient or effective if they strive for one set of goals in their instructional procedures and have their work and their results evaluated by a totally different standard.

Assumption Number Three

Another assumption arises from the fact that, in this era, man is making especially great break-throughs in the field of communciation, break-throughs which we may be certain must result in change—and change for the better. School education has been bogged down in its traditional systems of communicating knowledge and of passing on skills. Now we are apparently rocketing ourselves ahead to a new and most promising development in education.

What we are talking about is referred to sometimes as "programmed learning" and sometimes as "automation in education." The first and, to date, the most important result of the application of this automation in education is the establishment of the fact that machines or programmed-learning devices can communicate more efficiently and effectively than ever before a vast majority of the learning items which for generations have been communicated by traditional classroom teaching procedures.

Our third assumption must be that the communication of knowledge from the information "haves" to the information "have-nots" is important in the education of the oncoming generation; and now "teaching-machines" can communicate knowledge, can "teach" skills, and can establish attitudes toward information and knowledge more effectively and much more efficiently than can the classroom teacher.

The challenge here is to direct the purposes and to program effectively the content of such "machines" and their media of instruction. And here is another big, big challenge. Suppose that, by the application of teaching-learning machines, we can "teach" reading, languages, and basic mathematics in 30 or 40 per cent of the time now used to "teach" these subjects; and suppose that the results of teaching by machines indicate that machine-learning is better all-around than the learning resulting from traditional classroom teaching? What if, in the over-all, content and skill subjects may be "taught" in 30 per cent of the curriculum time presently consumed by these subjects? What that is worth-while—and this is a challenge—what that is worth-while will teachers (or others) do with the 70 per cent, more or less, of present school time which is left over? What are teachers who are no longer needed as transmitters or communicators prepared to do with this extra time? What are the important learning and behavior development needs which cannot be met by machines? How are we to plan schools which make the most of machines and, at the same time, provide for new and worth-while activities which machine-teaching processes make possible?

Assumption Number Four

A fourth assumption is that social behavior is the resultant of the sum total

of all educational forces, the "bad" as well as the "good," which play upon individuals and groups of individuals. The school is not the only place where people get education. We assume that professional educators are becoming increasingly aware of this phenomenon and that they will increasingly strive to marshal all educational resources of the community and to channel those forces effectively to obtain their maximum power for improved education of people.

The challenge is how do we go about making maximum good use of the total educational resources of a community? How do we line up the educational forces which are not only in the school, the home, and the church but in newspapers, magazines, radio, television, movies, books, toys, youth gangs, and the like? By what procedures do we focus the impact of these and other educational agencies on the "good" goals of our society?

Why in a community in which it is difficult to market a new model car, or a house, or a refrigerator, or a television set unless the buying public is convinced that that new model reflects the newest, the latest, the best in design, mechanics, and performance; why in a society where the public demands assurance that its defense funds are spent on only the latest developments in airplanes or rockets; why in a nation whose parents seek out for their loved ones the doctors who apply the latest therapies known to science; why do people who normally demand only the latest in almost all other facilities, commodities, and services for which they spend their money—why do they tolerate and sometimes even demand the spending of their education dollars on obsolete school facilities and instructional practices?

Why has a profession which is charged with a large share of the responsibility of passing on the heritage of our nation; which is charged with the task of developing the social and physical scientists on whom our health, our happiness, and our peaceful life on earth depend; which is charged with the responsibility for educating all our people in the ways of better living in a rapidly changing world—why has this profession failed to educate people about the importance of demanding schools in which these responsibilities can be carried out in the most efficient and effective ways now known?

And there are even more important questions. How do we go about focusing all of our outside-of-school forces, which educate, too, on these problems? How do we go about lining up radio, and Hollywood, and television, and newspapers and magazines, and book publishers, and advertising agencies on the side of those who strive for the "good" goals of education? How do we in the schools, together with the other agencies of our community and nation, marshal our total forces and line up our total manpower to put into effect, for our generation and for those which will follow, the ever-increasing knowledge we have about how to educate people for better living?

We all have a big job to do to upgrade the classroom teacher to the point where he makes optimum use of the new tools already available and those coming just around the corner. It is a job which cannot be done without the co-operation of the general public, the laymen in such groups as Pi Lambda Theta, the teacher education colleges, and (most of all) the active, professional teachers themselves.

The role of the teacher who applies all that is known now about how we can help young people learn better, more effectively, and more efficiently is not an easy one. Neither is the role of the learner under such a teacher an easy one. Modern, advanced, scientific teaching is a tough job calling for the highest of professional knowledge, ability, and stamina. It does not take much imagination or skill to teach when the curriculum and the tool are the textbook. But it takes more than many are capable of to teach "as well as modern educators know how" to teach today. This is why it is no wonder that some teachers themselves unwittingly subvert attempts by enlightened lay people and professional leaders to modernize the curriculum and methods of teaching. It is a fact that this modern teaching is too tough for them.

Only recently, as time goes when a people reaches out to the stars, has man discovered a new power in the educability of man, the ultimate potentials of which are beyond imagination, a new power which bids well to be the thrust which can rocket him to his long-sought goal of the good life on earth. The harnessing of this power and the application of it to man's age-old yearning to reach the star of democracy and good living for all men must claim a first priority on the resources of this great nation.

Let us be careful that we do not get scared into substituting for our hard-to-attain star of democracy a closer, more easily attained astral body like an "Explorer" or a "Vanguard" which represents a striving for far different goals. Let us make the most of what our challenging age offers in ways and tools for lifting man beyond his regrettable today into a long-anticipated tomorrow through education.

In the new era lies a world society of untold magnificence and happiness for all humankind if we are willing to cut loose the lines of fear which moor us to the false security of tradition and to "blast off" on our true course with the superpower of an all out total education program. In the new era lies the satisfaction of achieving such long-sought-after triumphs as peace on earth if we are ready to apply our most "progressive" efforts to the task of education.

surveying what education is doing to help adolescents move toward maturity

BLANCHE G. BOBBITT*

THE POTENTIAL GREATNESS of our country lives in our children and youth. This potential is not mere numbers but rather the quality, the intelligence, the earnestness of our young people. Our potential greatness lies in how well our youth respond to the opportunities of the free way of life—how well they learn to make intelligent choices. The heart of the free way of life consists of the constant ability to make choices and the wisdom to make the right choices, for without choice there is no freedom. Years ago, our citizens began investing thought and money in education so that young people would learn how to choose wisely. No effort must be spared to achieve this goal.

Education has two main purposes: first, to continue our culture; and, second, to help boys and girls move toward maturity. We are concerned here mainly with the second of these purposes. We are surveying what we are doing in education to help young people move toward maturity. We might say we are surveying what education is doing to help immaturity move toward maturity—to help young people learn to make wise choices.

Let us compare youth and immaturity with adulthood and maturity. Childhood and youth are periods of rapid growth—years of becoming. Youth are incomplete physically, emotionally, intellectually, socially—youth are not fully developed; they are continuously growing. Adulthood and maturity are stages of development when physical growth slows down, great responsibilities must be shouldered, and each person is expected to carry his own load in life.

Adulthood and maturity, however, are not the same. Adulthood is a stage of physical development, and maturity is a psychological development—a growth in understanding and awareness. A mature adult is one who is facing life with an active mind and who is trying to do what needs to be done to improve the situations he meets. The maturing person is one whose power over his environment is matched by an awareness of what his actions mean. Ability to choose and power to act are matched by power of understanding.

What is education doing to help youth to interpret constantly changing experi-

This address was presented at the White House Conference on Children and Youth held in Washington, D.C., in 1960.

---

* BLANCHE G. BOBBITT is supervisor of health education and editor of the *Health Education Journal*, Los Angeles City Schools, Los Angeles, California.

ences, to understand the relation between cause and effect, and to handle life situations by making intelligent choices? Education is helping youth toward maturity in many ways.

(1) EDUCATION HELPS YOUTH TO ACQUIRE THE BASIC SKILLS OF COMMUNICATION—THE FUNDAMENTAL THREE R'S PLUS SPEAKING AND LISTENING. Pupils are taught how to speak and write correctly, clearly, and effectively. They are shown how to listen with intelligence and discrimination. They are instructed in the computation skills, the use of numbers in everyday life, and the language of mathematics. Teachers guide pupils in reading for information and for pleasure. They lead pupils to think logically, to collect facts, to see relationships, and to make their decisions only after the facts are collected and considered. Of course, how much is learned and remembered of what is taught depends on the quality of teaching and the ability, capacity, and drive of the individual pupils themselves.

(2) EDUCATION HELPS YOUTH TO UNDERSTAND, APPRECIATE, AND PRACTICE THE PRINCIPLES OF AMERICAN DEMOCRACY. Our pupils pledge allegiance to the flag of the United States of America with understanding and appreciation. They participate in democratic practices in the classroom. They have many opportunities to make choices and solve problems in student government activities. Our pupils are introduced to the literature of the United States to inspire them with the achievements of the men and women who made this country great. They learn about the history and geography of our country, as well as the rights, privileges, and responsibilities of citizenship. They are taught that ours is a government of laws and not of men, where laws must be respected and obeyed if we are to remain a free people and the will of the majority must govern. Teachers stress respect for persons and properties, the rights of individuals, and the appreciation of the worth and dignity of each individual regardless of race, religion, national background, or economic status. They help our youth to learn how to recognize and analyze propaganda, to take part in community projects, to try to understand international relations, and to champion freedom and the cause of democracy. Education prepares youth to make the wise choices which will perpetuate the free way of life.

(3) EDUCATION WORKS TOWARD THE DEVELOPMENT OF A SENSE OF RESPONSIBILITY IN EACH PUPIL. Our pupils are led to discover, accept, and respect themselves and others. The teacher is in a position to spark the ambitions of boys and girls to self-confidence and continuous improvement. It is the teacher's rare privilege to excite the abilities he sees in his pupils by leading them to the thresholds of their own minds.

Education helps youth face problems squarely and objectively. Young people are encouraged to develop inquiring minds, to think critically, to relate and evaluate facts, to be selective and intelligent consumers, to be wise users of resources—including time, energy, and effort—and to work consistently toward the solution of personal, school, and community problems.

Education helps youth learn to meet failures and successes. It stresses the rewards and the necessity of self-discipline—without which there is no freedom. It

stresses productive effort and the satisfactions that come from accepting responsibility for one's self and for others. In our schools, pupils become acquainted with ways to show concern for the rights and welfare of others.

Education helps youth to stand on their own feet, to distinguish between fact and fancy, to face facts, to get along with others, and to get satisfactions from assuming responsibility.

(4) EDUCATION HELPS BOYS AND GIRLS TO ACHIEVE THEIR MAXIMUM POTENTIAL IN PHYSICAL HEALTH AND IN EMOTIONAL AND SOCIAL HEALTH. Education builds upon the health knowledge, attitudes, and practices taught in the home. It tries to meet the basic physical and emotional needs of pupils because it is an accepted fact that a sick or emotionally-disturbed pupil cannot learn as well as a healthy pupil—cannot get the greatest benefit from his schooling.

Many learning experiences are provided in health education. These are associated with health services in the school; with living in a healthful and sanitary school environment; and with classroom instruction about cleanliness, posture, foods and nutrition, rest and sleep, prevention and control of disease, growth and development, the fundamentals of emotional and social health, community health, and safety. An activity program is provided to help pupils achieve and maintain physical fitness.

The schools teach boys and girls the wise use of leisure time. There are many opportunities for pupils to discover talents and abilities and to express themselves in creative activities which may be carried on during leisure time. However, the major concern of teachers is not the pupil's leisure—the pupil takes care of this rather well. The teacher's concern is, rather, how to get the pupil to share his leisure with his homework.

The school environment promotes growth toward maturity because its emotional climate is usually accepting, understanding, motivating, secure, consistent, controlling. Many improvements are being made in education to meet the needs of handicapped pupils, of retarded pupils, and of gifted pupils. These improvements are due in large part to research now in progress.

(5) EDUCATION HELPS YOUTH APPRECIATE AND EVALUATE THEIR ENVIRONMENT—THEIR SURROUNDINGS, THEIR HOMES, SCHOOLS, CHURCHES, COMMUNITIES. One aim of education is that some insight be developed concerning the impact of environment on the life and customs of people. An introduction is given to the fundamentals of science, to the scientific method, to the changes in our lives brought about by science and technology, and to the interdependence of living things. Pupils are helped to recognize the social and economic implications of a shrinking world in an expanding universe. Many activities are provided for them to work and associate with one another so they may grow into the complexity of social relationships. Education helps youth to adjust habits of living to changes in environment, to recognize ways to improve their environment, and to take the responsibility for these improvements when possible.

(6) EDUCATION HELPS YOUTH TO CHOOSE VOCATIONS WISELY. Pupils are taught to appreciate the need for accuracy and precision, the dignity of labor, and the

satisfaction from work well done. Each pupil is helped to know the vocation for which he has aptitude and interest and to work toward greater application of his abilities for future advancements. Educational and vocational guidance given in the schools helps youth toward economic independence and financial security.

(7) EDUCATION PROVIDES SOME PREPARATION FOR SUCCESSFUL FAMILY LIVING. Pupils are taught to appreciate their families, to value the family as the fundamental unit of our society, and to strive to be worthy family members. Schools help youth develop wholesome attitudes toward the opposite sex and guide young people toward the wise solution of problems connected with courtship, marriage, and parenthood. Courses in senior problems and family life education help adolescents to understand their sexual role in society and to grow toward sexual maturity, which is closely related to maturity of character. Instruction is given on the importance of physical health and emotional maturity in family living.

(8) EDUCATION HELPS YOUTH TO INTERPRET LIFE'S EXPERIENCES AND SITUATIONS AND TO DEVELOP A PHILOSOPHY OF LIVING. During adolescence, an emerging independence is accompanied by a compelling interest in the meaning of life. Through well-guided classroom discussions, student body responsibilities, and many other learning experiences associated with the schools, youth are helped to put two and two and many more two's together into a wholeness—into an understanding about the interrelationships of people and of people with nature —in other words, toward a philosophy of man's purpose in society and in this world. Therefore, education helps youth recognize values, appreciate standards and ideals, and develop ethical character.

There are endless horizons for youth through education. They are provided a wide variety of experiences so they may learn to make intelligent choices. And they are helped to move toward maturity, to achieve as sound a mind as possible in as sound a body as possible, to cope with constant and rapid changes in their environment, and to strive toward the solution of increasingly complex problems in an increasingly complex society.

Is education doing all that has been outlined here?

Is every school measuring up 100 per cent?

Are all of the pupils taking full advantage of everything education has to offer?

Pupils certainly have profited from their education to the extent that the United States has remained free these past 184 years. Whether this nation chooses to remain free for another 184 years and longer will depend on how well education can meet the needs of our youth in moving toward maturity.

research

Recipients of the Pi Lambda Theta fellowships are required to make a report for publication on the study for which the award was made. Following are two such reports fulfilling requirements in effect when the fellowships were granted.

Educational Objectives: The Relation between the Process Used in Their Development and Their Quality is discussed by Margaret P. Ammons.

The Problem

This study was designed to achieve four purposes: (1) to discover what processes are used by school systems in the determination of educational objectives; (2) to determine to what extent school systems follow any process recommended by curriculum authorities; (3) to discover whether there is a significant relation between the quality of the process used to develop educational objectives and the quality of the objectives resulting from use of the process; and (4) to identify factors other than process which may influence the quality of objectives.

One of the most significant questions to be considered in curriculum development is how educational objectives shall be determined. Educational literature is replete with analyses of the problem and suggestions for its solution. Jensen, for example, states, "Determining what the aims of education should be is probably the most difficult and crucial question facing educators today."[1] In summarizing his proposals regarding this curricular step, Tyler says, "We are devoting so much time to the setting and formulation of objectives because they are the most critical criteria for guiding all other activities of the curriculum maker."[2] Further testimony to the importance of objectives and their formulation is their appearance in every course of study examined by this writer.

The mere existence of objectives, however, does not serve to meet fully the requirement that they guide the subsequent educational decisions mentioned by Tyler. Objectives, as opposed to aims or other terms usually intended to signify a more general level of educational purpose, are conceived to be statements so carefully formulated as to provide guidance to all who are to use them. Tyler says, "In organizing a single list of important objectives it is desirable to state these objectives in a form which makes them most helpful in selecting learning experiences and in guiding teaching."[3]

By "objectives," authorities mean sets of statements which are more precise and which can serve as a guide to answer ensuing educational questions rather than general, sometimes vague statements. For purposes of this study, this distinction was maintained and is basic to much of the theoretical material in the investigation. In this study, the vague, rather general statements of purpose for the schools are called "aims." Statements which describe student behavior to be developed

[1] Gale E. Jensen, *The Validation of Aims for American Democratic Education* (Minneapolis, Minnesota: Burgess Publishing Company, 1950), p. 1.

[2] Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: University of Chicago Press, 1950), p. 40.

[3] *Ibid.*, p. 28.

and the content to be used in the development of these behaviors are called "objectives."

Early in this century, educators proposed what they believed to be new and sound methods of determining objectives; their major concern was to make curriculum development more scientific. Scientific curriculum development in this context means specification of particular steps to be taken and precise measurements to be made. These steps and measurements were to enable educators to replace subjective choice with objective decisions.

Bobbitt and Charters were among the earliest of the educators to suggest scientific curriculum development.[4] These writers deplored the haphazard manner in which educational programs were developed and urged that educators employ a systematic approach to the problem of curriculum development. Central to the proposals of these and other men was the assumption that education was to prepare children for adult life and that so to prepare them required an exhaustive list of adult activities to serve as objectives of educational programs. Studies were then instituted to discover what activities comprised adult life and which of these could be legitimately constructed as objectives of the schools. Though this approach was a step forward in curriculum planning, the results of its application were largely predetermined by its very nature—objectives were always activities of adults. Furthermore, the entire method of determining objectives grew from an assumption regarding what schools ought to accomplish.

Tyler, in an effort to eliminate the shortcomings he saw in the methodologies of Bobbitt and others, developed a new rationale.[5] In his scheme, Tyler asserts that other methods relied to too great a degree on a single source of objectives—activities. He therefore suggests that educators turn to such areas as needs of learners, community life, and subject specialists. Objectives derived from these sources must then be screened through psychology and the philosophy of the school staff. Thus, Tyler, while broadening the basis upon which decisions about objectives are to be made, still allows these decisions to be governed by the preference of the school staff.

Jensen derived from dominant American ideals. But the selection of lists of such ideals again rests upon the preference of the person who selects. Jensen presents one set of ideals which leads only to objectives which reflect these ideals.[6]

Finally, neither the method of Tyler nor that of Jensen is sufficiently complete, explicit, and unambiguous to allow it to be validated by empirical means. And neither method eliminates personal preference of the educator as a major factor in the determination of what educational objectives are to be.

The model tested in this study was designed to achieve three purposes. First, the model was to set down without ambiguity and in a rational order the steps to be taken in developing educational objectives. Second, it was to be so constructed as to remove the necessity and the possibility that decisions concerning objectives be made on the basis of individual bias or group whim. Third, it was

[4] Franklin Bobbitt, *The Curriculum* (Boston: Houghton Mifflin Co., 1918); W. W. Charters, *Curriculum Construction* (New York: Macmillan Co., 1923).

[5] Tyler, *op. cit.*

[6] Jensen, *op. cit.*

to demonstrate one method of converting certain theoretical formulations and value questions in curriculum to a design appropriate for empirical research.

To achieve these purposes, the writer developed a model which is based upon the recommendations of Tyler and Jensen but which has additions to and alterations in the rationales of these two men. The model does not dictate the substantive content of objectives nor does it presuppose a general type of objectives. It is not based upon a preconceived notion of what objectives ought to be. Furthermore, the model makes it possible to identify appropriate empirical evidence regarding objectives which have been considered to be value questions answerable solely on the basis of opinion and preference. While the model does not remove those value questions, it does assign responsibility for value decisions and offers a process whereby these decisions can be made more intelligently and objectively. Finally, the model itself is a formulation of particular aspects of curriculum theory which can be subjected to empirical inquiry. Such models have not been available before in curriculum research.

The model which resulted may be described as a series of steps to be taken to develop sound educational objectives, with each step having a companion criterion to be used in judging the objectives resulting from the step.

STEPS (To be taken by the curriculum worker)	CRITERIA (To be used to judge objectives)
(1) Consult board as to its aims; have board clarify its aims; use aims as the basis for selecting objectives.	(1) Validity—do objectives accurately reflect the aims of the controlling agency?
(2) Choose and consult relevant data-sources to determine the appropriateness of objectives for the learners for whom they are proposed; evaluate proposed objectives in terms of information from data-sources; make indicated changes or rejections.	(2) Appropriateness—do objectives seek to develop behaviors appropriate for the learners for whom the objectives are proposed?
(3) Apply the criterion of feasibility; consider the operational situation; identify the factors influencing the practicality of the objectives.	(3) Feasibility—are objectives practical in the given situation?
(4) Analyze statements for clarity of language; have teachers react to objectives to determine whether it is possible for them to select learning situations and evaluation techniques on the basis of the objectives; make changes or rejections indicated.	(4) Precision—are objectives clearly enough stated to give the proper guidance in selecting learning situations and evaluation techniques?

(5) Analyze set of objectives to determine its internal consistency; apply the criterion of consistency; make objectives consistent or choose among the inconsistent ones on the basis of relative importance.	(5) Consistency—will the achievement of any one objective make the achievement of any of the others impossible or doubtful?
(6) Check for comprehensiveness of the set of objectives according to criteria devised by the curriculum worker; check printed statement of the board to be certain that all aims have been translated; apply the criterion of consistency by having the board evaluate the set of objectives.	(6) Comprehensiveness—do objectives reflect all aims of the board?

This model was used to test the independence of process and product or the relation of the quality of the process used to formulate objectives and the quality of the objectives resulting from use of the method.

Experimental Design and Procedures

This study was designed in two phases. Phase I was devoted to a description of practices employed to develop educational objectives reported by seventy-seven selected school systems. Phase II focused on testing the relation of the process used to develop objectives and the quality of objectives resulting from use of the process. Also investigated in Phase II was the influence of certain factors on teachers' appraisal of objectives.

Phase I. Systems for Phase I were selected on the basis of size and geographic location. All systems with between five and ten elementary schools within a 300-mile radius of Chicago received the initial questionnaire. There were 359 systems which met these criteria. Of the 234 returned, 77 were in usable form. Description of practice reported in a later section is based upon these 77 responses.

Phase II. Systems for Phase II were selected on the basis of the response made to the initial questionnaire. Four whose reported practice most closely resembled the process recommended in this study and five whose reported practice least resembled this process were chosen. However, even the four did not report practices which were extremely close to the recommended process.

Studies in curriculum suggest at least four factors other than process which may influence the way in which teachers appraise objectives. Three of these were described by Nerbovig in her study.[7] They are (1) the level at which the teachers taught (primary or intermediate grades); (2) service on committees that formulated objectives; and (3) length of teaching experience. She discovered that intermediate-grade teachers who had participated in the formulation of objectives and who had longer teaching experience more frequently used objectives in planning their instructional programs than teachers who did not fall into these categories.

[7] Marcella H. Nerbovig, "Teachers' Perception of the Function of Objectives" (Ph.D. dissertation, University of Wisconsin, 1956).

A fourth possible factor affecting teachers' appraisal of objectives might be the similarity of values among the groups developing and using the objectives. That is, if the value patterns of teachers who participate and do not participate in the development are similar, the nonparticipants may judge objectives similarly to participants, even if the process is judged to be poor. Battle's study, which shows that pupils whose values most closely resemble the values of the teacher are given higher grades by the teacher, lends some support to the foregoing hypothesis.[8]

Phase II was carried on in seven major steps.

(1) Selecting school systems. Systems were selected on the basis of responses to an initial questionnaire asking for information about ways in which they formulated objectives.

(2) Selecting teachers. (a) System teachers. Primary and intermediate teachers from each of the systems were selected in the following categories: those with less than five years' experience in the system who served on no committees which formulated the system's objectives; those with less than five years' experience in the system who served on such committees; those with six years' experience or more who served on no such committees; those with six years' experience or more who served on such committees. (b) Independent teachers. A panel of three primary and three intermediate teachers outside the systems being studied was selected.

(3) Collecting data. To evaluate the process used in each system, the writer interviewed the person highest in the administrative hierarchy who had the responsibility for formulating objectives and scored the process reported against the recommended process established for this study. This yielded "process scores." "Product scores" were derived from responses to questionnaires from teachers and members of boards of education.

(4) Determining the halo effect of the appraisal of objectives by teachers in the systems studied. A part of the same questionnaire to which system teachers responded was given to the panel of independent teachers. The questions for independent teachers related to the criteria of precision and consistency. The significance of the differences in the mean scores of the two groups was calculated by applying the Fisher "t" test.

(5) Determining the effect of three factors on teachers' appraisal of objectives. These factors were grade level, tenure in the system, and participation in the formulation of objectives. To determine this effect, regression analysis was employed.

(6) Determining the influence of values on the evaluation of objectives. The influence of the value factor was determined by assessing the similarity of value patterns among groups of teachers who did and who did not participate in the formulation of objectives. Again, the significance of the difference between the mean scores of these two groups was tested.

(7) Testing the relation between process and product for all systems. A modification of the chi-square technique was used for this purpose.

Instruments Used. For this study, five instruments were used. Four of these

[8] H. J. Battle, "Application of Inverted Analysis in a Study of the Relation between Values and Achievement" (Ph.D. dissertation, University of Chicago, 1954).

were questionnaires constructed by the writer; the fifth was the Allport-Vernon-Lindzey *Study of Values*.[9] The four questionnaires are described below.

(1) The initial questionnaire asked administrators to describe the process used in their systems to formulate educational objectives.

(2) The interview questionnaire was composed of six open-ended questions designed to learn to what degree the system followed the process recommended in this investigation.

(3) The questionnaire for teachers asked them to answer five questions about the objectives. These questions related to the precision of objectives for selecting learning activities, the precision of objectives for selecting evaluation techniques, the consistency of the objectives, teachers' use of objectives, and teachers' estimation of the desirability of objectives.

(4) The questionnaire for the board asked members to check statements which best described their participation in the formulation of objectives for their systems.

Conclusions—Phase I

Seventy-seven administrators responded to the initial questionnaire which asked for a description of the practices followed in each system to develop educational objectives. The responses indicate that practices vary considerably among the seventy-seven systems; it is impossible to identify a common pattern.

However, with regard to the question of whether or not curriculum workers use any recommended or systematic process in developing their educational objectives, the answer appears, in general, to be "No." The comment of one administrator that "We just went off into the blue" may characterize the approach of many school systems to this curricular task.

Conclusions—Phase II

Phase II was designed to answer several major questions. The analysis of the data for Phase II revealed problems which gave rise to further questions, the answers to which comprise the conclusions of Phase II of the study.

(1) Are process and product related? The conclusions with regard to this question must be drawn within the limitations set by the size of the sample upon which the findings are based. The approximation of chi-square used here was designed for use with small samples. But the sample used in this study was unavoidably reduced; thus confidence in the findings is limited to the extent that reduced sample size affects this confidence. The trend in the data does suggest that there is a relation between the quality of the process and the quality of the product. But the limits of the data collected for this study prevent accurate identification and description of that relation. Thus, the null hypothesis—that process and product are not related—cannot be rejected on the basis of these findings.

(2) Do teachers' judgments reflect the quality of objectives? The writer anticipated at the outset of this study that to have teachers judge objectives according to the criteria selected for use in the present investigation would yield scores which would, within limits, be an accurate indication of the quality of the objectives

[9] Gordon W. Allport, Philip E. Vernon, and Gardner Lindzey, *Study of Values* (3rd edition; Boston: Houghton Mifflin Co., 1960).

under study. However, when teachers' scores were examined, it became apparent that their judgments represent something other than the quality of objectives as quality is defined here. Therefore, the writer scored the objectives by applying the criteria. She found that teachers apparently had used some basis for scoring objectives other than the one intended by the questions asked of teachers. The conclusion is that, when quality as defined in terms of this study is sought, the appraisal of teachers is not a reliable determiner of such quality. This appears to be true of teachers in the systems where the objectives are in use and of teachers who are independent of these systems.

(3) Is teachers' use of objectives related to other factors? Where the process scores and teachers' use of objectives were tested, the probability that process and use are related was .50. It is concluded that the process used to develop objectives is not related to teachers' use of objectives. Since the difference between mean scores on use and desirability is significant, with objectives being scored much lower on desirability than on use, the extent to which teachers use objectives cannot be attributed to their estimation of the desirability of objectives. Since these results of regression analysis were unstable, the writer does not believe that grade level, tenure, and participation play a major part in determining teachers' use of objectives and that some other factor or factors not identified here govern such use.

(4) Do factors other than process affect teachers' appraisal of the quality of objectives? The factors which the writer originally hypothesized have some influence on teachers' appraisal of objectives were grade level, tenure, and participation. These factors proved to be of no more significance in teachers' appraisal of the quality of objectives than in teachers' use of objectives. This finding, coupled with the fact that these variables accounted for no more than 12.2 per cent of the variance in the problems, caused the writer to conclude that, within the framework of this study, these variables are not major influences on teachers' judgments of their system's objectives.

(5) Do system teachers appraise their objectives to be better than do independent teachers? The significance of the difference between the mean scores given to objectives by teachers in the systems studied and by teachers independent of these systems supports the conclusion that system teachers do not judge their own objectives to be better than independent teachers judge them. Where significant differences did occur, independent teachers judged objectives to be better than did system teachers.

(6) Do values affect appraisal of objectives? Since there were no significant differences between the scores given to objectives and those who did not so participate and since the value patterns of these two groups did not differ consistently, there may be some reason for hypothesizing that similarity of value patterns between participants and nonparticipants results in similar scores being given to objectives by these two groups of teachers.

Significance of the Study

The findings and conclusions of this study identify four areas of major concern for curriculum workers, both theorists and practitioners.

First, based upon the information received from school systems which participated in this study, it appears that few if any of these systems have objectives which meet the definition of objectives used in this study. The statements which teachers were asked to judge lacked, in almost every case, descriptions of student behavior. Therefore, teachers are being asked to plan instructional programs consistent with the aims of the school system by using statements which do not contain sufficient information for such planning. The writer believes use of statements in such form to be a logically impossible task.

Second, the teachers who participated in this study, with great consistency, indicated that they do, in fact, perform the task described above. Therefore, teachers must be planning instructional programs on some basis either different from or in addition to the statements provided by the school system. Any number of such bases could be offered as the correct one; evidence is needed before conclusive statements can be made with respect to this point.

Third, curriculum workers at all levels and typically in all systems studied in this investigation do not seem to approach the task of formulating educational objectives in a systematic way—particularly in any way recommended by curriculum authorities. Perhaps this suggests that people whose responsibility it is to formulate objectives are not aware that to be in the most useful form the verbal statements of objectives must meet specific criteria. Lack of such awareness raises the possibility that the professional preparation of persons who work in curriculum has not been sufficiently directed to helping teachers and administrators develop and state educational objectives in the most useful form.

Fourth, the absence of an empirically validated and widely accepted rationale or theory regarding curriculum development has left both institutions which prepare curriculum workers and school systems which undertake to improve their curriculums without sufficient guidance in formulating objectives. To discover, then, that educational objectives are not stated in the most useful form should not be surprising.

The foregoing statements strongly suggest that steps need to be taken to alleviate the problems confronting persons who attempt to improve their curriculums. While the indication is that lack of tested theory is basic to the solution of the other problems, it remains that, even within the framework provided by available rationales and recommendations, improvements are possible. New processes can be evolved and tested from co-operation among school people and theorists. Such experimentation should point to deficiencies inherent in theories. The elimination of such deficiencies should lead to significant improvements in both curriculum theory and practice.

* * *

Experiencing the Role of the Teacher: a Case Study of Preservice Elementary School Teachers Practicing Role-Function Behaviors is discussed by Dorothy I. Seaberg

The study herein reported was an action research project concerned with the

"gestalt" of teaching. Approaching the problem of educating teachers according to the teaching role they play, the process of teaching was conceptualized around the role of the teacher—or the role-functions in which the teacher engages in his encompassing job as a teacher. The behaviors or acts in which the teacher engages as he functions in his multidimensional role were accordingly defined. Experiences were designed for a group of twenty-two student teachers, giving them opportunities to conceptualize the role of the teacher and to practice behaviors needed to function in that role.

The study was consistent with current thinking regarding the professional education of teachers. Ryans has pointed out the need to study teacher behavior in a context of theory.[1] Bellock and Huebner, in writing for the *Review of Educational Research,* point out that "research in teacher effectiveness has frequently bypassed the fundamental problem of identifying or conceptualizing the teaching process."[2]

In general, writers speaking authoritatively in the field of teacher education point out that areas needing special focus in research seem to be the integration of theory into practice through the medium of planned laboratory experience definitely related to course work or seminars; instructional methods employed in the college classroom which utilize teaching-learning principles; the streamlining and improvement of methods courses into large block programs; the development of a greater understanding of children; and the need for evaluation on the basis of critical teacher behaviors necessary for functioning in the role of the teacher. These were the guidelines kept in focus by the researcher in developing the action research project summarized in this report.

Problem

In this action research project, a typical cross-section of twenty-two preservice elementary school teachers at Wayne State University was provided with a specially-designed program revolving around student teaching. Given a unique background of readiness experiences the previous semester in an experimental program conducted by Allen, these students had identified the professional teacher as functioning in the roles of classroom administrator, facilitator of good human relations, educational diagnostician, guide in the learning process, and responsible contributing member of the teaching profession.[3]

The major purpose of the reported study was to help this selected group of students conceptualize further the professional role of the teacher and utilize principles drawn from child growth and development and the dynamics of learning in establishing their role-function behaviors. The study proposed to clarify and utilize the five role-functions identified in the Allen study as a base for de-

[1] David G. Ryans, "Theory Development and the Study of Teacher Behavior," *Journal of Educational Psychology,* XLVII (1957), 462-75.

[2] Arno A. Bellock and Dwayne Huebner, "Teaching," *Review of Educational Research,* XXX, No. 3 (1960), 247.

[3] Arthur T. Allen, "Teachers in the Becoming: A Case Study of an Initial Professional Experience for Prospective Elementary School Teachers" (Ed.D. dissertation, College of Education, Wayne State University, 1960).

veloping an evaluation instrument for appraising the behaviors practiced by these preservice teachers.

It was a further intent of this study to provide special experiences which would give students opportunities to function more fully in the role of the professional teacher, to evaluate the contributions of these experiences, and to make recommendations for types of experiences which may be beneficially included in a student teaching program for elementary teachers. It was also hoped that some hypotheses could be developed for further testing which would contribute to a conceptual framework for teacher education at large. It was not the purpose of this study to establish the relative superiority of this type of program over any other.

Four questions were formulated as basic to the purposes of the investigation. (1) What are the behaviors which teachers practice as they function in the professional role of the teacher? (2) What kinds of experiences have enabled students to identify, conceptualize, and utilize effective behaviors as they function in the professional role of the teacher? (3) How may student-teacher performance be evaluated to determine the extent to which ideal behaviors of professional teachers have been practiced? (4) In what ways may university personnel work together and with the co-operating public school personnel to facilitate these experiences?

Procedure

A design for student teaching was created which included, as an integral part, a course interrelating the psychology of learning with the teaching of language arts, social studies, and arithmetic in the elementary school. This design was predicated upon the following basic assumptions.

(1) The elementary school classroom provides the learning laboratory wherein problems in adapting to teacher role-functions must be encountered by prospective elementary school teachers.

(2) Since motivation for learning occurs within the context of individual "need" and the "demands of a situation," a campus class or seminar centered around the psychology and methodology of the teaching-learning process has relevance for the student and becomes functional when structured to serve as an extension of the "live" learning laboratory in the public school classroom. This extension of the learning laboratory should assist the prospective teacher in the identification of educational problems, in the gathering of data for the solution to these problems, and in the evaluation of outcomes. It should help the prospective teacher shape for himself a developing theoretical framework within which he will make educational decisions.

(3) Methodology is applicable with varied subject matter in the elementary school classroom, i.e., there is no set methodology for the teaching of arithmetic, language arts, or social studies. Rather, there are principles of method derived from the socio-psychological dynamics of learning and a democratic philosophy of education. These principles need to be identified and applied or built into the behavior of the prospective teacher by the teacher himself if behavior characteristic of a professional teacher is to result.

(4) The campus class should be thought of not merely as an extension of the learning laboratory (wherein functional projects for the students' experimenta-

tion may be initiated) but as an extension of supervision itself (wherein the carrying out of special projects may be supervised).

(5) To insure integration of learning and continuity of experience, an instructional tie needs to be made between the general supervision in the classroom (or learning laboratory) and the guided experiences in the campus class.

Accordingly, the researcher functioned in a dual role of instructor and college supervisor for student teaching. The major adviser for the study participated as a coteacher, and occasionally resource people contributed to class sessions. Course requirements consisted of action-research-type projects which were carried out in the student teaching setting, including pupil studies, studies of group behavior, development and evaluation of units of study, and surveys of the communities in which the students were doing their teaching.

A study guide and an evaluation instrument, defining 118 *ideal* behaviors as inferred from principles drawn from the behavioral science and conceptualized educational theory, were developed in reference to the five major role-functions which had been identified: classroom administrator, facilitator of good human relations, educational diagnostician, guide in the learning process, and responsible contributing member of the teaching profession.

Content analyses were made of students' evaluations, logs, and written projects; questionnaires administered to students, co-operating teachers, and school principals; and evaluations of teaching written by co-operating teachers.

Findings

The dissertation reporting this action research project contains case study material which portrays students functioning within a continuum of individual differences in reference to teacher role-function behaviors. Case material from two of the students was used to exemplify the teacher behaviors defined in the evaluation instrument.

A thorough evaluation made of the entire project revealed the following major findings.

(1) Certain action-research-type projects had definite value in helping students integrate theory with practice and were especially beneficial in helping these prospective teachers focus on individual differences. Four projects—planning, executing, and evaluating a unit of study; a group behavior term project; a pupil study term project; and a community survey (undertaken as a group in each community where the students were doing their teaching)—fell in this category. With the exception of the community survey, a majority of the students felt these projects should be retained in a student teaching experience having relative value in the order in which they are listed above. The problems involved in implementing the projects with this group of preservice teachers arose over the amount of time consumed. Some evidence was obtained to indicate that laboratory experiences should be extended to provide more opportunities for each to function in the role of educational diagnostician and to participate more fully as a responsible contributing member of the profession.

(2) There was evidence that continuity and integration of experience leading to a conceptualization of the teaching process can be achieved through block pro-

gramming with one instructor functioning as guide and supervisor of experiences. There is need, however, for liberal use of resource people to insure the students' exposure to a variety of viewpoints.

(3) In the evaluation of student teacher behavior, the class median in no case fell below step four (growth described as "continual and consistent") on a five-point continuum of defined behavior. Co-operating teachers judged the students to have achieved teaching proficiency in the following descending order of role-functions: facilitating good human relations; assuming responsibility as a contributing member of the profession; administering a classroom and guiding learning (of coequal rank); and lastly, diagnosing educational problems. Co-operating principals rated the students lowest as guides in learning. These findings may indicate that role-function behaviors of guide in the learning process and educational diagnostician are likely to be the most difficult to develop.

(4) Although some students had difficulty in establishing desirable role-function behaviors, evidence from case studies indicates that students with high potential made much growth in teaching. These students were apparently helped in developing leadership in children and in fostering critical and creative thinking. Good interpersonal relationships were characteristic of students who were able to achieve in these areas.

(5) The consistency of philosophy between co-operating teachers and pre-service teachers was a critical factor in enabling students to establish desirable role-function behaviors. Without suitable laboratory situations, it is doubtful that much headway can be made in helping prospective teachers function consistently with the theoretical constructs of the profession.

(6) The need for extensive orientation of co-operating personnel before and during the launching of a new program was clearly demonstrated.

Recommendations

The results of the study suggest that experiences allowing students to achieve success with the developmental tasks of teaching can best be provided through a series of laboratory experiences (designed into "block" programs, incorporating related seminars) which increasingly enable the student to become immersed in the professional role of the teacher. The developmental levels for which programs should be designed were envisioned as follows.

First developmental level—readiness. The writer envisions this level to include a look at the citizen in the world community; inductive development of the aims of education; a study of the self as a prospective teacher; a study of children and youth in extraschool agencies; first-hand study of the sociology of the school, including a survey of communities of various socioeconomic levels; observation of the work of the school at large and some observation-participation experiences in individual classrooms. Students would begin to focus on child growth and development.

Second developmental level—exploratory teaching. During this developmental level, teaching would begin on a tutorial basis and progress to teaching of small groups. The role-functions of the teacher would be explored in this context, and principles would be identified to govern operational behavior. Methodology from

a sociopsychological point of view would be introduced. Study of child growth and development would be continued with a pupil study term project built into the experience. Students would focus quite intensively on the role-function of educational diagnostician as they work on a tutorial and small-group basis. Students would learn how to plan for teaching on a daily basis. Later they would develop a unit of study which would be cotaught with the co-operating teacher.

Third developmental level—"responsible" student teaching. On this level, the writer envisions the student studying methodology as related to the psychology of learning with focus on *content areas* taught in the elementary school. The student would make a study of group dynamics and discipline within the context of his student teaching situation. He would progressively assume increasing responsibility as a teacher in the classroom, moving into total responsibility if he were able to do so.

Fourth developmental level—internship. Those students who were ready could progress to teaching internships and could return to campus for problem-solving and curriculum-study seminars. During this phase of development, students would identify a problem upon which to do action and/or library research. Students who were not ready for the internship could progress into another semester of intensive student teaching under the direction of a co-operating teacher. This experience would also be accompanied by a problem-solving and curriculum-study seminar with the student identifying some problem for special study.

Broad Areas Which Need Further Investigation

As an outgrowth of the action research project herein reported, the writer identified the following broad questions as needing further investigation. (1) How can the concept of teacher role-functions be best used as an effective organizing center for developing a methodology which helps student teachers integrate theory into practice? (2) How does personality affect teacher behavior in performing role-functions? (3) Can group cohesiveness and good group morale be enhanced in teacher education by keeping groups of students together for successive semesters of study? (4) What kinds of attitudes toward teacher education and the profession of teaching are likely to develop when students engage in a planned program of experiences geared to developmental levels of teaching? (5) What changes in school practices result from involving co-operating public school personnel in teacher education projects?

NATIONAL BOARD

President ..... M. VIRGINIA BIGGY
Concord Public Schools
Stow Street
Concord, Massachusetts

First Vice-President ..... ROBERTA B. SHINE
501 Sheridan Road
Evanston, Illinois

Treasurer ..... JANE M. HILL
3051 Harrison Street N.W.
Washington 15, D.C.

Vice-President ..... DOROTHY MAY ABBOTT
6814 Raymond Avenue
University City 30, Missouri

Vice-President ..... CHARLOTTE D. ELMOTT
3728 Dixon Street
Santa Barbara, California

Vice-President ..... LUCILE U. HOLLIS
Department of Business Education
Ball State Teachers College
Muncie, Indiana

Vice-President ..... LILLIAN S. LOGAN
Evansville College
Evansville, Indiana

Editor ..... MIRIAM M. BRYAN
Educational Testing Service
Princeton, New Jersey

Consultant ..... SYLVIA VOPNI
College of Education
University of Washington
Seattle 5, Washington

• • •

Executive Director and Managing Editor ..... CARMEN JOHNSON
Pi Lambda Theta, 927 Fifteenth Street N.W., Washington 5, D.C.

STANDING COMMITTEES, 1961-63

Committee on Chapter Constitutions and Bylaws
Chairman ..... MARY-ELLEN PATTERSON
2431 Crown Point Avenue
Omaha 11, Nebraska
Virginia A. Archer, Helen W. Fell, Rachel R. McKay

Extension Committee
Chairman ..... LUCILE U. HOLLIS
Department of Business Education
Ball State Teachers College
Muncie, Indiana
Hollie Bethel, Violet Davis, Alice C. Good, Betty Jo Hudson, Virginia C. Joyce, Doris E. Nason, Ruth Eckert, Jill H. Scott, Helen H. Sornson

Fellowship Awards Committee
Chairman ..... MIRIAM M. BRYAN
Educational Testing Service
Princeton, New Jersey
Frances M. Beck, Louise Beltramo, Marion J. Jennings, Adelle H. Land, Sylvia Vopni

Finance Committee
Chairman ..... MARGARET W. EFRAEMSON
Merion Gardens
Merion, Pennsylvania
Jane M. Hill, Lois Knowles

Program Committee
Chairman ..... CHARLOTTE D. ELMOTT
3728 Dixon Street
Santa Barbara, California

Committee on Public Affairs
Chairman ..... LILLIAN S. LOGAN
Evansville College
Evansville, Indiana
Sue A. Clement, Barbara F. Coverstone, Lois E. Coy, Charlotte A. Helstad, Linda J. Hetherington, Wilhelmina B. Kaupe, Kate P. Miano, Ora Mae Winstead

Committee on Public Relations
Chairman ..... DOROTHY M. MCCREERY
1546 Sherwin Avenue
Chicago 26, Illinois
Beatrice O. Allen, Donna F. Burch, Anne G. Coomer, Olive A. Hall, Hazel Hamrin, Jessie May Harrison, Elsie V. Holliday, Helen F. Isbitz, Luanne I. Mills, Peggy S. Rampersad, Maxine N. Stephanian

Committee on Publications
Chairman ..... ROBERTA B. SHINE
501 Sheridan Road
Evanston, Illinois
Miriam M. Bryan, Jane M. Hill, Carmen Johnson, Margaret C. Raabe

SPECIAL COMMITTEES, 1961-62

Membership Committee
Alumnæ Chairman ..... LOUISE P. OWEN
688 Collingwood Avenue
Detroit 2, Michigan
Lois E. Baldwin, Bertha B. Mathews, Ruth D. Moore, Muriel V. Ryall, Martha G. Shild, Inez O. Stacey, Helen M. Stelzriede, Margaret R. Taylor

College Chairman ..... VIOLA M. HALL
233 W. Borden Avenue
Syracuse 5, New York
Evelyn I. Banning, Diane E. Cox, Josephine S. Davis, Patricia D. Lawnick, Edna P. Smith, Helen D. Wilson

Nominating Committee
Chairman ..... FRIEDA HERBST
966 N. Belleview Place
Indianapolis 22, Indiana
Helen L. Harriger, Gail J. Shannon, Kathleen M. Strittmatter, Marion E. Wiles

• • •

Trustees, Ella Victoria Dobbs Trust Fund
Chairman ..... VERNA M. WULFEKAMMER
810 Leawood Terrace
Columbia, Missouri
Alberta L. Meyer (Association for Childhood Education International), May V. Seagoe

CHAPTER PRESIDENTS AND CORRESPONDENTS, 1961-62

ALPHA (Univ. of Mo.):
President—Mrs. Patricia D. Lawnick, 12 Thistledown Dr., Columbia, Mo.
Correspondent—Miss Vivian Sue Hawkins, 212 Education Bldg., Univ. of Mo., Columbia, Mo.

BETA (Syracuse Univ.):
President—Miss Jean M. Szczypien, 425 Wilkinson St., Syracuse 4, N.Y.
Correspondent—Miss Helen M. Phelan, 1069 W. Genesee St., Syracuse, N.Y.

GAMMA (Univ. of Kan.):
President—Miss Carol Ott, 1345 W. Campus, Lawrence, Kan.
Correspondent—Miss Billie J. Lamkin, 1433 Tennessee, Lawrence, Kan.

DELTA (Univ. of Pittsburgh):
President—Miss Ruth A. Witter, 3216 Gaylord Ave., Pittsburgh 16, Pa.
Correspondent—Miss Eleanor L. Brown, Apt. 3, Union Bldg., Turtle Creek, Pa.

EPSILON (Univ. of Minn.):
President—Miss Donalda K. Vincent, 1105 W. 28th St., Minneapolis 8, Minn.
Correspondent—

ZETA (Univ. of Wash.):
President—Miss Sue Ellen Engstrom, 4541 19th Ave. N.E., Seattle 5, Wash.
Correspondent—Miss Noreen Kumasaka, 10007 Corliss Ave. N., Seattle 33, Wash.

ETA (Univ. of Pa.):
President—Miss Rebecca G. Shiplett, Univ. of Pa. Women's Residence Hall, 3333 Walnut St., Philadelphia 4, Pa.
Correspondent—

THETA (Univ. of Iowa):
President—Mrs. Nancy H. Kegley, 2607 East Court St., Iowa City, Iowa
Correspondent—Miss Thelma Peterson, 19 Leamer Court, Iowa City, Iowa

IOTA (Ind. Univ.):
President—Miss Barbara R. Frey, Univ. Apts. W. 208, Bloomington, Ind.
Correspondent—Miss Mary Jane Rourke, Sycamore Hall, Ind. Univ., Bloomington, Ind.

KAPPA (Univ. of Ore.):
President—Miss Caroline A. Kleczynski, 1675 Agate St., Eugene, Ore.
Correspondent—

LAMBDA (Univ. of Chicago):
President—Mrs. Peggy S. Rampersad, 5340 S. Woodlawn, Chicago 15, Ill.
Correspondent—

MU (Cornell Univ.):
President—Miss Donna Jean Avery, Box 141, R.D. #1, Newfield Rd., Newfield, N.Y.
Correspondent—Miss Marilyn Spiner, 210 Delaware Ave., Ithaca, N.Y.

NU (Ohio State Univ.):
President—Miss Marilyn M. Samsa, 90 E. 12th Ave., Columbus 1, Ohio
Correspondent—

XI (Univ. of Mich.):
President—Mrs. Katherine B. Mancell, 1905 E. Stadium Blvd., Ann Arbor, Mich.
Correspondent—Mrs. Dorothy L. Ouradnik, 1718 Baldwin Ave., Ann Arbor, Mich.

OMICRON (Univ. of Neb.):
President—Miss Mary Kathryn Drishaus, 540 N. 16th St., Lincoln 8, Neb.
Correspondent—

PI (Wash. State Univ.):
President—Mrs. Barbara O. Struthers, 511 Campus Ave., Pullman, Wash.
Correspondent—Miss Jeanne L. Petherick, Regents Hill, Pullman, Wash.

RHO (New York Univ.):
President—Mrs. Helen S. Wilke, 129 Delmar Ave., Glen Rock, N.J.
Correspondent—Mrs. Hortense G. McCarrol, 43 Danforth Ave., Jersey City 5, N.J.

SIGMA (Univ. of S. Calif.):
President—Mrs. Josephine S. Davis, 4025 Palmyra Rd., Los Angeles 8, Calif.
Correspondent—Dr. Blanche G. Bobbitt, 1500 Glenmont Dr., Glendale 7, Calif.

TAU (Univ. of N.D.):
President—Miss Sharon Ann Peterson, 2620 University Ave., Grand Forks, N.D.
Correspondent—

UPSILON (Stanford Univ.):
President—Mrs. Vivian S. Sherman, 975 Roble Ridge, Palo Alto, Calif.
Correspondent—Mrs. Eleanor W. Thonis, 1404 Oak Avenue, Redwood City, Calif.

CHI (Johns Hopkins Univ.):
President—Mrs. Marie B. Schmuck, 2917 Glenmore Ave., Baltimore 14, Md.
Correspondent—

PSI (Univ. of Tex.):
President—Mrs. Gail J. Shannon, 5104 Cloverdale Lane, Austin 2, Tex.
Correspondent—

OMEGA (Univ. of Calif.):
President—Mrs. Muriel A. Rose, 1917 Alcatraz Ave., Berkeley 3, Calif.
Correspondent—Mrs. Donia J. Oretsky, 662 The Alameda, Berkeley 7, Calif.

ALPHA ALPHA (Univ. of Ariz.):
President—Miss Kathleen M. Strittmatter, 1840 E. Lee St., Tucson, Ariz.
Correspondent—Mrs. Marie Helen H. High, 3327 N. Geronimo, Tucson, Ariz.

ALPHA BETA (Univ. of Wis.):
President—Mrs. Margaret C. Connet, 1517 Morrison St., Madison 5, Wis.
Correspondent—

ALPHA GAMMA (Boston Univ.):
President—Mrs. Edna P. Smith, 10 Lexington Ave., Lexington 73, Mass.
Correspondent—Miss Roselmina M. Indrisano, 29 Bayswater St., East Boston 28, Mass.

ALPHA DELTA (Univ. of Calif.):
President—Miss Frances Ceccarini, 325 S. Bedford Dr., Beverly Hills, Calif.
Correspondent—Mrs. Elfrieda D. Davis, 1262 S. Beverly Glen Blvd., Los Angeles 24, Calif.

ALPHA EPSILON (Columbia Univ.):
President—Mrs. Hazel W. Howell, 466 Mt. Hope Ave., Dover, N.J.
Correspondent—

ALPHA ZETA (Northwestern Univ.):
President—Miss Dorothy M. McCreery, 1546 Sherwin Ave., Chicago 26, Ill.
Correspondent—Mrs. Sarah G. Danzig, 1120 Lake St., Evanston, Ill.

ALPHA ETA (Harvard Grad. School of Educ.):
President—Dr. Evelyn I. Banning, 42 Howard St., Norton, Mass.
Correspondent—

ALPHA THETA (George Washington Univ.):
President—Mrs. Henrietta R. Howard, 9203 Cypress Ave., Bethesda 14, Md.
Correspondent—Mrs. Elsie J. Nelson, 8300 Roanoke Ave., Takoma Park 12, Md.

ALPHA IOTA (Claremont College):
President—Mrs. Ruth P. Tangeman, 730 Santa Clara Ave., Claremont, Calif.
Correspondent—Mrs. Margery P. Belding, 1636 Deventer Dr., LaVerne, Calif.

ALPHA KAPPA (Pa. State Univ.):
President—Mrs. Sara H. Clemson, 6 Harris Acres, State College, Pa.
Correspondent—

ALPHA LAMBDA (Southern Methodist Univ.):
President—Miss Mary Judith Watkins, 3120 Daniels, Dallas 5, Tex.
Correspondent—Miss Janna Chandler, Mary Hay Hall, SMU, Dallas 6, Tex.

ALPHA MU (Univ. of N.M.):
President—Mrs. Helen L. Harriger, 2626 General Marshall N.E., Albuquerque, N.M.
Correspondent—Mrs. Katheryn K. Painter, 1602 Calle Del Ranchero N.E., Albuquerque, N.M.

ALPHA NU (Univ. of Buffalo):
President—Mrs. Carolyn F. Neyerlin, 368 Green Acres Rd., Tonawanda, N.Y.
Correspondent—Miss Alice G. Oliver, 120 Monroe Dr., Williamsville 21, N.Y.

ALPHA XI (Univ. of Tenn.):
President—Miss Norene Bogart, 218 Ault St. S.E., Knoxville 14, Tenn.
Correspondent—

ALPHA OMICRON (Colo. State College):
President—Miss Lynne A. Hopkins, 928 20th St., Greeley, Colo.
Correspondent—Miss Marlys R. Jarrett, 1729 10th Ave., Greeley, Colo.

ALPHA PI (Wayne State Univ.):
President—Mrs. Toby H. Mindel, 16561 Greenfield Rd., Detroit 35, Mich.
Correspondent—Miss Ruth M. Edberg, 455 W. Oakridge, Ferndale 20, Mich.

ALPHA RHO (Univ. of Colo.):
President—Mrs. Mary Ann H. Miklich, 2509 Grove #C, Boulder, Colo.
Correspondent—Miss Judith M. Fredericksen, 1011 16th St., Boulder, Colo.

ALPHA SIGMA (Tex. Woman's Univ.):
President—Mrs. Glenda B. Simmons, 2912 Longfellow, Denton, Tex.
Correspondent—Mrs. Madeline V. Ashburn, 1013 Oakland Ave., Denton, Tex.

ALPHA TAU (Ball State Teachers College):
President—Mrs. Alice C. Good, Sulphur Springs, Ind.
Correspondent—

ALPHA UPSILON (Southern Ill. Univ.):
President—Miss Barbara Coverstone, Office of Student Affairs, SIU, Carbondale, Ill.
Correspondent—Miss Ann G. Krutsinger, 505 E. Walnut, Carbondale, Ill.

ALPHA PHI (Univ. of Fla.):
President—Mrs. Jean P. Tison, Coll. of Educ., Univ. of Fla., Gainesville, Fla.
Correspondent—Dr. Dorothy C. Laird, Coll. of Educ., Univ. of Fla., Gainesville, Fla.

ALPHA CHI (Long Beach State College):
President—Mrs. Virginia V. Henderson, 16203 Haas Ave., Gardena, Calif.
Correspondent—Mrs. Ann Cranmore, 458 28th St., Hermosa Beach, Calif.

ALPHA PSI (Los Angeles State College):
President—Mrs. Janola T. Scales, 9132 S. Hobart Ave., Los Angeles 47, Calif.
Correspondent—Mrs. Lois O. Merkley, 9701 7th Ave., Inglewood 4, Calif.

ALPHA OMEGA (Bradley Univ.):
President—Mrs. Virginia S. Bitner, Glasford, Ill.
Correspondent—Miss Fern Thompson, 922 N. Hamilton Blvd., Apt. 306, Peoria, Ill.

BETA ALPHA (San Jose State College):
President—Miss Janice K. Riley, 22 S. 7th, San Jose 12, Calif.
Correspondent—

BETA BETA (San Diego State College):
President—Mrs. Doris V. Beyrer, 4129 Middlesex Dr., San Diego 16, Calif.
Correspondent—

BETA GAMMA (San Francisco State College):
President—Mrs. Gail Humphrey, San Francisco State College, 1600 Holloway Ave., San Francisco 27, Calif.
Correspondent—

CENTRAL MISSOURI ALUMNAE (Columbia):
President—Mrs. Pauline D. Heinberg, 109 W. Parkway, Columbia, Mo.
Correspondent—

CENTRAL OHIO ALUMNÆ (Columbus):
President—Mrs. Margaret R. Taylor, 204 Oxley Rd., Columbus 4, Ohio
Correspondent—Mrs. Bessie J. Beecham, 715 Lilley Ave., Columbus 5, Ohio

CHICAGO ALUMNÆ (Chicago area, Ill.):
President—Mrs. Edna M. Siebert, 5742 N. Kingsdale Ave., Chicago 46, Ill.
Correspondent—Miss Roberta B. Shine, 501 Sheridan Rd., Evanston, Ill.

COUNCIL BLUFFS-OMAHA ALUMNÆ (Iowa-Neb.):
President—Dr. Hollie Bethel, 5012 Lafayette Ave., Omaha 32, Neb.
Correspondent—Mrs. Mary Ann Steele, 1312 N. 52nd St., Omaha 32, Neb.

DAYTON ALUMNÆ (Ohio):
President—Mrs. June Mary H. Fahner, 4506 Rosemary Ave., Dayton 5, Ohio
Correspondent—Miss Elizabeth Hury, 241 Brooklyn Ave., Dayton 17, Ohio

DENVER ALUMNÆ (Colo.):
President—Mrs. Gwendolyn B. Borgmann, 710 Eudora St., Denver 20, Colo.
Correspondent—Miss Alice C. Finch, 4322 Perry St., Denver 12, Colo.

DETROIT ALUMNÆ (Mich.):
President—Mrs. Bertha B. Mathews, 150 Richton Ave., Highland Park 5, Mich.
Correspondent—Miss Ethel Wooden, 2609 W. 13 Mile Rd., Royal Oak, Mich.

EUGENE ALUMNÆ (Ore.):
President—Miss Pauline V. Pearce, 1800 Orchard St., Eugene, Ore.
Correspondent—Mrs. Eva L. O'Neil, 200 E. 37th Ave., Eugene, Ore.

EVANSVILLE ALUMNÆ (Ind.):
President—Mrs. Mary N. Wyttenbach, 300 S. Lincoln Pk. Dr., Evansville 14, Ind.
Correspondent—Miss Mary Alice Peck, 727 E. Blackford, Evansville 13, Ind.

FORT WAYNE ALUMNÆ (Ind.):
President—Mrs. Adeline C. Brumbaugh, 3714 Plymouth Rd., Fort Wayne, Ind.
Correspondent—Miss Marie Ehle, 127 McKinnie Ave., Fort Wayne, Ind.

GRAND FORKS ALUMNÆ (N.D.):
President—Mrs. Marjorie S. Gray, 2616 Fourth Ave. N., Grand Forks, N.D.
Correspondent—

HAWAII ALUMNÆ (Honolulu):
President—Mrs. Vera W. Elliott, 245 Portlock Rd., Honolulu 16, Hawaii
Correspondent—Miss Shirley H. Fujii, 104 Laimi St., Honolulu 17, Hawaii

INDIANAPOLIS ALUMNÆ (Ind.):
President—Miss Lois E. Coy, 408 N. Emerson, Indianapolis 19, Ind.
Correspondent—the President

KANSAS CITY ALUMNÆ (Kan.-Mo.):
President—Dr. Frieda M. Gipson, 1514 Colorado, Kansas City 27, Mo.
Correspondent—Miss Hazel Johnson, 4820 Charlotte, Kansas City 10, Mo.

KENTUCKIANA ALUMNÆ (Ind.-Ky.):
President—Miss Muriel V. Ryall, 2024 E. Oak St., New Albany, Ind.
Correspondent—Miss Frances C. Beard, 321 E. Park Pl., Jeffersonville, Ind.

LONG BEACH ALUMNÆ (Calif.):
President—Mrs. Maxine N. Stephanian, 1310 Peck St., Compton, Calif.
Correspondent—Mrs. Mildred H. Van Leuven, 279 Santa Ana, Long Beach 3, Calif.

LOS ANGELES ALUMNÆ (Calif.):
President—Mrs. Tema S. Clare, Box 109, Univ. of S. Calif., Los Angeles 7, Calif.
Correspondent—Dr. Ernestine A. Kinney, 1622 N. Ave. 46, Los Angeles 41, Calif.

METROPOLITAN NEW YORK ALUMNÆ (N.Y.):
President—Miss Helen T. Corzine, Apt. 6FW, 604 W. 112th St., New York 25, N.Y.
Correspondent—Dr. Ruth E. Hartley, 54 Morningside Dr., New York 25, N.Y.

NORTHERN CALIFORNIA ALUMNÆ (San Francisco Bay area):
President—Mrs. Lila C. Macway, 1810 Short St., Berkeley 2, Calif.
Correspondent—Mrs. Betty E. Gandel, 1950 30th Ave., San Francisco 16, Calif.

NORTHERN INDIANA ALUMNÆ (South Bend area):
President—Miss Lois E. Taylor, 1711 Stevens Ave., Elkhart, Ind.
Correspondent—Mrs. Myrtle S. Burns, 307 Seimetz Dr., La Porte, Ind.

NORTHERN OHIO ALUMNÆ (Cleveland):
President—Miss June Overfield, 1818 Allandale Ave., #107, E. Cleveland 12, Ohio
Correspondent—Mrs. Maggie A. Powell, 3631 Rollston Rd., Shaker Heights 20, Ohio

PASADENA ALUMNÆ (Calif.):
President—Mrs. Dosha P. Gerckens, 529 N. Sunnyslope Ave., Pasadena 8, Calif.
Correspondent—

PHILADELPHIA ALUMNÆ (Pa.):
President—Mrs. Martha G. Shild, 289 Richards Ave., Lansdowne, Pa.
Correspondent—Mrs. Margaret W. Efraemson, Merion Apts., 63rd & City Line & Wynnewood Rd., Merion, Pa.

PORTLAND ALUMNÆ (Ore.):
President—Mrs. Inez O. Stacey, 7005 N.E. 29th Ave., Portland 11, Ore.
Correspondent—Miss Maude W. Cooke, 2705 S.E. River Rd., Portland 22, Ore.

ST. LOUIS ALUMNÆ (Mo.):
President—Miss Ruth A. Rice, 9 Stratford Lane, Brentwood 17, Mo.
Correspondent—

SAN BERNARDINO VALLEY ALUMNÆ (Calif.):
President—Miss Elizabeth L. Dimock, 3120 Valencia Ave., San Bernardino, Calif.
Correspondent—Mrs. Ruth K. Lewis, 2359 Serrano Rd., San Bernardino, Calif.

SAN DIEGO ALUMNÆ (Calif.):
President—Mrs. Ruth D. Moore, 4355 Harvard Ave., La Mesa, Calif.
Correspondent—Mrs. Ann M. McKinney, 5219 E. Falls View Dr., San Diego 15, Calif.

SAN JOSE ALUMNÆ (Calif.).
President—Miss Helen Dimmick, 32 Mission St., San Jose 12, Calif.
Correspondent—Miss Emily DeVore, 156 N. 31st St., San Jose 27, Calif.

SANTA BARBARA ALUMNÆ (Calif.):
President—Dr. Mildred C. Robeck, 452 Venado Dr., Santa Barbara, Calif.
Correspondent—Mrs. Zelma W. Pierce, 766 Mission Oak Lane, Santa Barbara, Calif.

SANTA MONICA BAY AREA ALUMNÆ (Calif.):
President—Dr. Olive A. Hall, Educ. Dept., Univ. of Calif., Los Angeles 24, Calif.
Correspondent—Mrs. Ruth B. Watson, P.O. Box 1067, Sherman Oaks, Calif.

SPOKANE ALUMNÆ (Wash):
President—Miss Helen L. Cleveland, W. 2116 Courtland Ave., Spokane 13, Wash.
Correspondent—Mrs. Florence P. Marks, S. 4111 Latawah, Spokane 36, Wash.

TOLEDO ALUMNÆ (Ohio):
President—Miss Violet Davis, 1914 Evansdale, Toledo 7, Ohio
Correspondent—Mrs. Mildred M. Bergener, 2040 Hogarth Rd., Toledo 15, Ohio

WASHINGTON ALUMNÆ (Seattle):
President—Miss Lois E. Baldwin, 5946 37th S.W., Seattle 6, Wash.
Correspondent—Mrs. Wilhelmina S. Johnston, 2617 W. Newton, Seattle 99, Wash.

WESTERN PENNSYLVANIA ALUMNÆ (Pittsburgh):
President—Miss Margaret L. Foster, 1 Cedar Blvd., Pittsburgh 28, Pa.
Correspondent—Miss Helen J. Heazlett, 1044 Blackridge Rd., Pittsburgh 35, Pa.

ADDRESS CHANGES

Remailing of undelivered *Educational Horizons* is not possible. The national office staff will continue to try to trace addresses of members whose journals cannot be delivered because they failed to notify the office that they were moving. No address changes are made unless members themselves notify the office to do so. The appearance of a new address for a member on a chapter dues list cannot be considered authority to change an address. Therefore, to insure receiving *Educational Horizons* without interruption, it is each member's responsibility to inform the national office PROMPTLY of any change of address. Please indicate the former as well as the new address.

The national office staff would appreciate a notification to that effect if the change of address is for a chapter officer.

Postmaster: If undeliverable, RETURN REQUESTED to Pi Lambda Theta, 927 Fifteenth St. N.W., Washington 5, D.C.

W 61-62